



Just the Facts ...

DOT Regulates 10 - 24.9% Formaldehyde Solutions

May 2006

1. **BACKGROUND** . Title 49 CFR provides two entries for formaldehyde solutions in the Hazardous Materials Table Part 172.101: Formaldehyde solutions, flammable, UN 1198; and Formaldehyde solutions, with not less than 25% Formaldehyde UN2209. Both materials are regulated by highway, water, and air. These entries imply that Formaldehyde solutions, which are not flammable or have less than 25% Formaldehyde, are not regulated, but 10-24.9% require regulation as a Hazard Class 9 material when shipped by air. Formaldehyde solutions in these concentrations are noxious and can cause extreme annoyance or discomfort to crew members in the event of a spill or leak on an aircraft.

2. **BASIC SHIPPING DESCRIPTION**. The basic shipping description for 10-24.9% formaldehyde solutions shipped by air is "Aviation regulated liquid, n.o.s. (formaldehyde), 9, UN3334." This basic description is required for all multi-modal shipments which have the potential to be transported by air also.

3. **FORMALIN SOLUTIONS**. Refer to the Material Safety Data Sheet (MSDS) to determine the percentage of formaldehyde when shipping Formalin solutions,.

- Full strength Formalin is 37% Formaldehyde and will be shipped as Formaldehyde solutions, flammable, UN 1198.

- 25% Formalin solutions have approximately 10% Formaldehyde and are classified as "Aviation regulated liquid, n.o.s. (formaldehyde), 9, UN3334" for transportation by air. (Shipments of 10-24.9% formaldehyde solutions shipped by highway only do not require classification as a hazardous material.) Guidance for shipping these solutions are provided in Paragraphs 2 and 4 of this Fact Sheet.

- 10% Formalin solutions contain 3-4% Formaldehyde and are **not** regulated for transport by air or highway.

NOTE: Ensure that the flashpoint and percentage for formaldehyde are taken into consideration when you are shipping Formalin.

4. **SHIPPING SPECIFICATIONS:** Formalin solutions classified as Aviation Regulated Liquid can be shipped by commercial air as an excepted quantity package or non-bulk package. Aviation Regulated Liquid is not permitted in limited quantity packagings. **Tissues and specimens being shipped in formalin solutions are not considered to be Diagnostic Specimens or infectious substances unless there is a high probability that an infectious substance is present.**

a. Excepted quantity shipments:

1. .Packaging: The inner receptacle must not exceed 30 ml and the outer package must not exceed 500ml. (Aviation Regulated Liquid does not have a packing group assigned. For Class 9 substances for which no packing group is indicated, IATA requires Packing Group II quantities to be used)

2. Marking and Labeling: Use the excepted quantity label illustrated below. No other markings or labels are required.

DANGEROUS GOODS IN EXCEPTED QUANTITIES

This package contains dangerous goods in excepted small quantities and is in all respects in compliance with the applicable international and national government regulations and the IATA Dangerous Goods Regulations.

Signature of Shipper

Title Date

Name and address of Shipper

This package contains substance(s) in Class (check applicable box(es))

Class: ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 8 ☐ 9

and the applicable UN Numbers are

L350P Printed by Labelmaster, An American Labelmark Co., Chicago, IL 60646 (800)621-5806

3. Documentation: The Shippers Declaration of Dangerous Goods is not required. The “Nature and Quantity of Dangerous Goods” box of the airway bill must be completed with the words “Dangerous Goods in Excepted Quantities”

NOTE: Federal Express requests the placement of the proper shipping name and un id number in the nature and quantity of dangerous goods” box of the airway bill.

b. For non-bulk packages please refer to IATA’s Packing Instruction 906.

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[Back to Fact Sheet Index](#)